

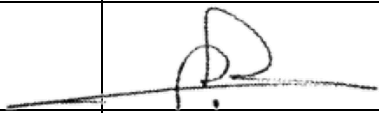
# Annual Environment Performance Report

Imperial Oil and Gas Pty Ltd  
Environmental Management Plan  
IMP4-3

17 October 2022 to 16 October 2023

Date	Revision	Reason for Issue	Author	Checked	Approved
11/01/24	1	Initial Submission	RL	NF, KW	

<b>Document title</b>	Annual Environment Performance Report
<b>EMP title</b>	2021-2025 EP187 Work Program NT
<b>Exploration Permit/Licence Number</b>	EP187
<b>Interest holder details</b>	Imperial Oil & Gas Pty Limited Level 5, 6 O'Connell Street Sydney, NSW, 2000 ABN 92002699578
<b>Operator details</b>	Imperial Oil & Gas Pty Limited Level 5, 6 O'Connell Street Sydney, NSW, 2000 ABN 92002699578

<b>Signature and Certification</b>	
I certify on behalf of Imperial Pty Ltd, this document is a true and accurate record of performance.	
Name	Robin Polson
Signature	
Position	Chief Financial Officer
Date	16 January 2024

<b>Acronyms / Terms</b>	<b>Definition</b>
AEPR	Annual Environment Performance Report
Code	Code of Practice: Onshore Petroleum Activities in the Northern Territory
DEPWS	Department of Environment, Parks and Water Security (NT)
DITT	Department of Industry, Tourism and Trade (NT)
EMP	Environment Management Plan
EP	Exploration Permit
NT	Northern Territory
Regulations	Petroleum (Environment) Regulations 2016 (NT)
NGERS	National Greenhouse Energy Reporting Scheme
WBIV	Well Barrier Integrity Validation

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# 1. Introduction

The Northern Territory (NT) Petroleum (Environment) Regulations 2016 (NT) (the Regulations) require an interest holder to provide a report to the Minister for Environment on an annual basis that outlines the environmental performance of the interest holder<sup>1</sup> (the Annual Environment Performance Report). The report must include sufficient information to allow the Minister to assess whether the interest holder has met the environmental outcomes and environmental performance standards included in the approved Environment Management Plan (EMP). This report considers information required to be recorded, monitored or reported under the Regulations and any other law in force in the NT related to the conduct of the regulated activity.

This Annual Environmental Performance Report (AEPR) applies to the following EMP's:

- *Imperial 2021-2025 EP187 Work Program NT Exploration Permit (EP) 187 (IMP4-3)* that was approved on the 17 October 2021 (EMP IMP4-3)

The period covered by this AEPR is from the 17 October 2022 to 16 October 2023.

<sup>1</sup> Petroleum (Environment) Regulations 2016 (NT) sch 1, item 11.

## 1.1. Background

The EMP (*IMP4-3*) was approved on the 17 October 2021.

The regulated activities under this EMP include land clearing, earthworks, establishing access ways, wastewater flowlines, gravel pits, groundwater monitoring bores and drill pads, conducting seismic surveys, drilling and hydraulic fracturing in EP187.

The below Figure 1 is the of EP187 with cumulative and proposed regulated activities under EMP IMP4-3.

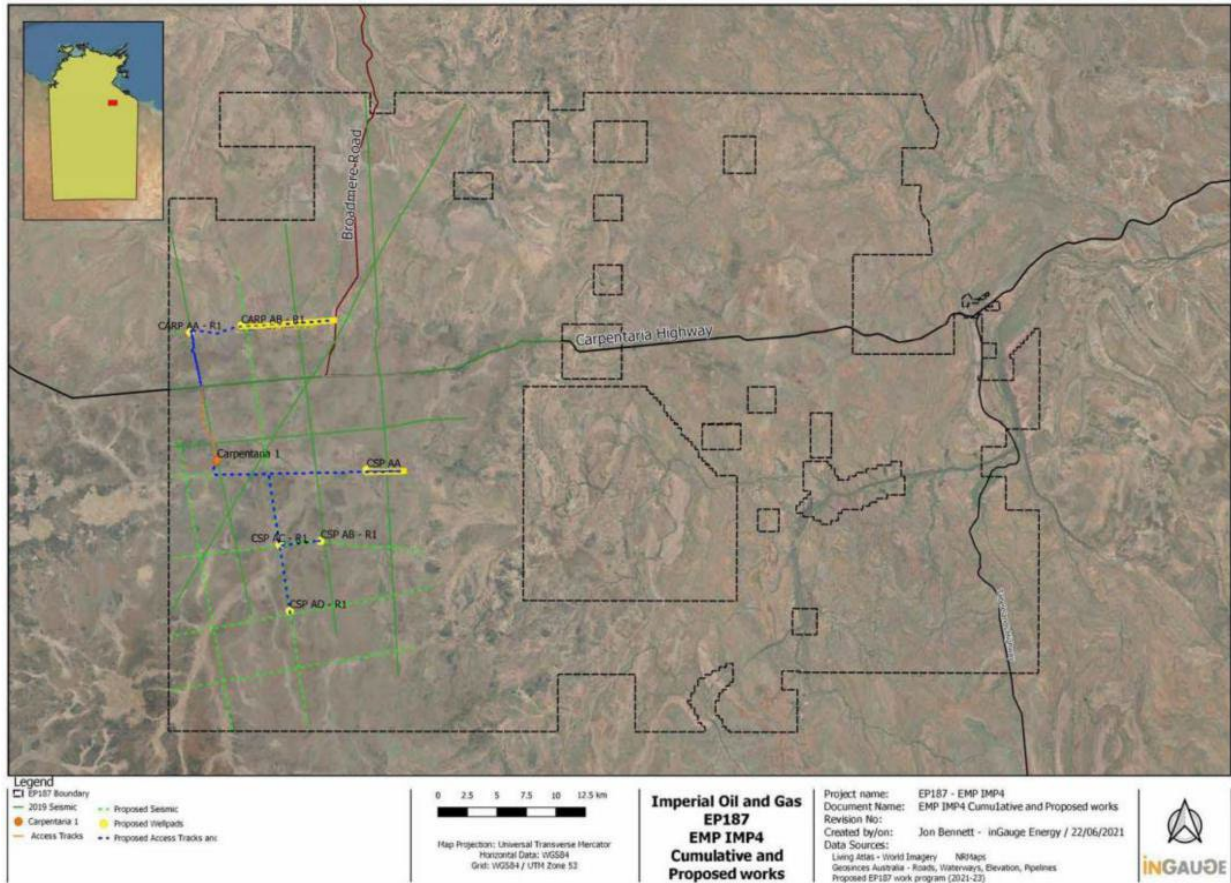


Figure 1 - Location of EP187 with cumulative and proposed regulated activities

## 1.2. Contents of performance report

This AEPR describes the environmental performance of Imperial Oil & Gas Pty Limited (Imperial) by evaluating the following:

1. compliance with Ministerial approval conditions, for the EMP
2. compliance with each environmental outcome and environmental performance standard within the approved EMP
3. compliance with reporting requirements in accordance with the Code and Regulations
4. all recordable and reportable incidents, including root cause analysis and related corrective actions to prevent re-occurrence
5. findings of any regulatory inspections and audits and related actions to address any findings.

### 1.3. Assessment of performance

Table 1 shows the performance status indicators used in this AEPR.

**Table 1: Performance Descriptors**

Indicator	Description
Compliant	Compliant with requirement for entire 12-month reporting period
Not Compliant	Interest holder did not comply with the requirement during the reporting period
Not Applicable	Requirement not applicable during the reporting period

### 1.4. Evidence of performance

The following sources of evidence are used to demonstrate compliance:

1. Internal assessment of compliance through verification of:
  - Site Photographs
  - Geospatial Files
  - Community Complaints Register
  - Site Induction Records
  - Waste Transfer Records
  - Leak Detection Surveys
2. Outcome of regulatory inspections conducted by the Department of Environment, Parks and Water Security (DEPWS) and the Department of Industry Tourism and Trade (DITT):
  - DITT Planned Inspection Exit Brief 30 August 2023
  - DEPWS Weed Management Branch Inspection March 2023
  - DEPWS Weed Management Branch Inspection July 2023
3. Recordable and reportable and recordable incident reports submitted to DEPWS.
  - 30 December 2022
  - March 2023
  - 2 July 2023
  - 29 September 2023
4. Reports provided to DEPWS, the DITT and other government agencies.
  - Notification of Hydraulic Fracturing
  - Civil reports
  - Weekly Drilling reports
  - Weekly reports
  - AEPR
  - Emissions report
  - ESC Audit
  - Quarterly groundwater monitoring
  - Interpretative Report of Groundwater Quality
  - Spill Register
  - Cementing Reports
  - Flowback Report
  - WBIV Report
  - Water and Wastewater Report

## 2. Demonstration of Performance

Table 2 demonstrates Imperial's compliance with Ministerial EMP approval conditions.

**Table 2: Compliance with Ministerial EMP Approval Conditions**

No	Ministerial Condition	Performance Status	Evidence
1	The interest holder must submit to the Department of Environment, Parks and Water Security (DEPWS), via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> the following:		
	<p><b>i.</b> Notification of the commencement of hydraulic fracturing activities prior to commencement</p>	Compliant	Notification of Hydraulic Fracturing was sent to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 28 November 2022. Further notification was submitted 6 December 2022.
	<p><b>ii.</b> An updated timetable for the regulated activity that is to be provided on the last day of each quarter (being 31 March, 30 June, 30 September and 31 December each year), that identifies activities completed in the current quarter and:</p> <ul style="list-style-type: none"> <li>regulated activities in the next quarter, including duration;</li> <li>activities in the next quarter based on commitments in the EMP relevant to the stage of the activity, including duration;</li> <li>due dates for satisfaction of Ministerial approval conditions in the next quarter; and</li> <li>due dates for regulatory reporting in the next quarter.</li> </ul>	Not Compliant	<p>Timetables for the regulated activity were provided via email to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on:</p> <ul style="list-style-type: none"> <li>30 December 2022 (due 31 December 2022)</li> <li>March 2023 (due 31 March 2023)</li> <li>2 July 2023 (due 30 June 2023)</li> <li>29 September 2023 (due 30 September 2023)</li> </ul> <p>Not Compliant due to submitting one Quarterly report two days after the required timeframe.</p>
	<p><b>iii.</b> During civil works (and noting civil works is taken to include any type of earth moving, land clearing, installation of gravel pits, establishment of well pads, establishment of access tracks and installation of wastewater flowlines) and seismic activities, weekly reports indicating:</p> <ul style="list-style-type: none"> <li>the status and progress of vegetation clearing and civil works at each location the activity is conducted;</li> <li>the outcome of any assessments undertaken by a suitably qualified person of geomorphic and hydrological investigations and the conclusion as to whether directional drilling is required, in advance of installing wastewater flowlines across a stream;</li> <li>the status and progress of seismic activities</li> <li>any fires potentially threatening the activity from external or internal sources</li> <li>the outcome of inspections of erosion and sediment control measures, and corrective actions taken; and</li> <li>the outcome of inspections and risk assessments for determining suitability of use of unsealed roads by any vehicle or machinery other than a light vehicle in the wet season</li> </ul>	Compliant	Civil reports sent to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 6 October 2023 and 10 October 2023
	<p><b>iv.</b> During drilling, daily on-site reports, to be consolidated and provided weekly, indicating:</p> <ul style="list-style-type: none"> <li>status and progress of drilling at each location;</li> <li>freeboard available in drill cutting pits (in cm); and</li> <li>the outcome of general site inspections relevant to drilling and waste, and corrective actions taken.</li> </ul>	Compliant	Weekly Drilling reports sent to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> by Nick Fraser for Carpentaria 3 and Carpentaria 4.
<p><b>v.</b> During hydraulic fracturing and flowback, weekly reports indicating:</p> <ul style="list-style-type: none"> <li>status and progress of hydraulic fracturing;</li> <li>weekly measurement of stored volume (in ML) and freeboard available (in cm) of wastewater storage tanks, unless operated in the wet season, during which it must be measured daily;</li> <li>volume of wastewater transferred via wastewater flowlines, including records of inflow and outflow (in L) for each transfer; and</li> </ul>	Compliant	Weekly reports were provided to <a href="mailto:onshoregas.depws@nt.gov.au">onshoregas.depws@nt.gov.au</a> that met the Ministerial Condition 1 (v).	

No	Ministerial Condition	Performance Status	Evidence
	<ul style="list-style-type: none"> <li>the outcome of general site inspections relevant to hydraulic fracturing and waste, and corrective actions undertaken.</li> </ul>		
	<p><b>vi.</b> During the wet season, weekly reports indicating:</p> <ul style="list-style-type: none"> <li>the outcome of inspections of erosion and sediment control measures, and corrective actions taken;</li> <li>the outcome of daily inspections of any secondary containment in use, and corrective actions taken;</li> <li>any halt to the regulated activity due to wet season conditions; and</li> <li>daily measurements of freeboard available in drill cutting pits and wastewater treatment tanks (in cm) whenever operational.</li> </ul>	Not Compliant	Weekly reports were provided during the wet season (1 October 2022 to 30 April 2023) to <a href="mailto:onshoregas.depws@nt.gov.au">onshoregas.depws@nt.gov.au</a> that met the Ministerial Condition 1v. However, as per Q1 Jan – Mar 2023 Quarterly Recordable Report, site access was not possible and site camera data was unavailable at Carpentaria 4 on numerous dates in Jan- March 2023.
	<p><b>vii.</b> For avoidance of doubt, if wastewater is present in tanks or flowlines, or drill cutting pits contain waste drill fluids and cuttings, these are considered to be operational. Reports must continue to be provided as per parts iv and v above, irrespective of whether there is manned activity occurring on site if the wastewater infrastructure is operational.</p>	Compliant	Weekly reports were provided to <a href="mailto:onshoregas.depws@nt.gov.au">onshoregas.depws@nt.gov.au</a> that met the Ministerial Condition 1 (iv).
	<p><b>viii.</b> In the event that multiple regulated activities under the EMP are being conducted concurrently, the weekly submission of consolidated daily reports may be further consolidated to a single submission, but must clearly identify the locations and activities to which the information pertains, in relation to each item listed in conditions iii to vi above, inclusive.</p>	Compliant	Weekly reports were provided to <a href="mailto:onshoregas.depws@nt.gov.au">onshoregas.depws@nt.gov.au</a> that met the Ministerial Condition 1.
2	<p>The interest holder must provide an annual report to DEPWS, via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a>, on its environmental performance, in accordance with item 11(1)(b) in schedule 1 of the Petroleum (Environment) Regulations 2016 (NT). With respect to the reports required to be submitted in accordance with item 11(1)(b) in schedule 1 of the Petroleum (Environment) Regulations 2016 (NT):</p>	Compliant	AEPR was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> by Charles Dack on 16 January 2023.
	<p><b>i.</b> The first report must cover the 12-month period from the date of the approval, and be provided within 3 calendar months of the end of the reporting period.</p>	Compliant	AEPR was submitted within the required timeframe.
	<p><b>ii.</b> Each report must align with the template and Guideline prepared by DEPWS for this purpose and be provided each year until such time a notification is made to the Minister under regulation 14 that the activity is complete, or until the EMP is revised and re-approved.</p>	Compliant	AEPR was submitted in the DEPWS template
3	<p>In support of clause D.6.2 of the <i>Code of Practice: Onshore Petroleum Activities in the Northern Territory</i>, an emissions report must be provided to DEPWS by 30 September each year, via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a>, which summarises actual annual greenhouse gas emissions from conduct of the regulated activity estimated and reported under the Commonwealth <i>National Greenhouse and Energy Reporting Act 2007</i> versus predicted emissions in the EMP.<sup>4</sup> The emissions report should include:</p>	Compliant	Emissions report for IMP 4.3 was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 29 September 2023.
	<p><b>i.</b> a summary of all regulated activities conducted which have contributed to greenhouse gas emissions during the reporting period; and</p>	Compliant	Emissions report included summary of regulated activities which have conducted to greenhouse gases during the reporting period.
	<p><b>ii.</b> explanation of differences between actual and predicted emissions with reference to all parts of the regulated activity with potential to create greenhouse gas emissions.</p>	Compliant	Emissions report includes explanation for difference between actual and predicted emissions.



No	Ministerial Condition	Performance Status	Evidence
4	Audits of compliance must be undertaken by a suitably accredited, qualified and independent person and the audit report provided to DEPWS via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> , no later than 4 weeks after the completion of the audits. The following must be adhered to:		
	i. An audit focused on implementation of the Erosion and Sediment Control Plan must be conducted no later than 2 weeks after the establishment of the first well pad, and again no later than 2 weeks after the establishment of another well pad.	Compliant	ESC Audit was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 24 October 2022. Further correspondence regarding this submission was provided to DEPWS on 24 December 2022.
	ii. An audit focused on key controls listed in the EMP relevant to drilling activities must be commenced in the 24 hours prior to commencement of drilling of the first exploration well, and again in the 24 hours prior to commencement of drilling another exploration well.	Compliant	Carpentaria 3 Operational assurance audit was commenced on 7 and 8 of October 2022 and finalized within the reporting period of this AEPR.
	iii. An audit focused on key controls listed in the EMP relevant to management of wastewater and containment of contaminants, including the Wastewater Management Plan and the Spill Management Plan, must be conducted during flowback and extended production testing on the first exploration well hydraulically fractured, and again on another exploration well hydraulically fractured	Compliant	Audit report was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 14 March 2023.
	iv. The first audit for each of the Erosion and Sediment Control Plan, drilling and hydraulic fracturing audits must: <ul style="list-style-type: none"> <li>a. be conducted by an independent auditor; and</li> <li>b. include a field-based inspection by the independent auditor to verify implementation of controls.</li> </ul>	Not Applicable	First audits were not due within the reporting period the reporting period of this APER (October 2022 to October 2023).
	v. Audits must focus on implementation of the EMP.	Compliant	Audit report submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 14 March 2023 included EMP implementation in the scope.
vi. Audit reports must be prepared in accordance with any published guidance issued by DEPWS and at a minimum must: <ul style="list-style-type: none"> <li>• include audit objectives, scope and audit methods used;</li> <li>• include the audit criteria used for determining compliance with the commitments in the EMP;</li> <li>• provide detail of the evidence used for determining compliance with the commitments in the EMP (noting for clarity, actual evidence does not need to be provided);</li> <li>• include photographic evidence from the field-based components of the audit;</li> <li>• include clear identification of opportunities for improvement, compliances and non-compliances, as determined by the audit; and</li> <li>• include recommended corrective actions for any identified non-compliances.</li> </ul>	Compliant	Audit report submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 14 March 2023.	
5	In support of clause B.4.17.2 of the Code of Practice: Onshore Petroleum Activities in the Northern Territory, the interest holder must:		
	i. undertake quarterly groundwater monitoring at each control and impact monitoring bore for a minimum of three years after establishment, unless otherwise advised by DEPWS;	Not Applicable	The EMP has only been active for 2 years. 3 years of groundwater monitoring has not yet been undertaken.
	ii. provide to DEPWS, via <a href="mailto:Onshoregas.depws@nt.gov.au">Onshoregas.depws@nt.gov.au</a> , the results of quarterly groundwater monitoring, within one month of collection, in a format to be determined by DEPWS;	Not Compliant	Quarterly groundwater monitoring emailed to DEPWS: <ul style="list-style-type: none"> <li>• ~25 November 2022 (portal submission)</li> <li>• ~16 February 2023 (portal submission)</li> <li>• 9 June 2023</li> <li>• 28 June 2023</li> <li>• 14 September 2023</li> </ul>

No	Ministerial Condition	Performance Status	Evidence
			Q2 Apr to Jun 2023 Quarterly Recordable Report outlines that quarterly sampling was not undertaken for RN042461 (C2) and RN43012 (C4) during April 2023.
	<p>iii. provide to DEPWS, via <a href="mailto:Onshoregas.depws@nt.gov.au">Onshoregas.depws@nt.gov.au</a>, an interpretative report of groundwater quality based on the groundwater monitoring required to be conducted at the well site(s) in accordance with Table 6 of the Code of Practice: Onshore Petroleum Activities in the Northern Territory. The interpretative report must be provided annually within 3 months of the anniversary of the approval date of the EMP and include:</p> <ul style="list-style-type: none"> <li>demonstration that there is no change to groundwater quality or level attributable to conduct of the regulated activity at the well site(s);</li> <li>interpretation of any statistical outliers observed from baseline measured values for each of the analytes;</li> <li>discussion of any trends observed; and</li> <li>a summary of the results including descriptive statistics.</li> </ul>	Compliant	An interpretative report of groundwater quality based on the groundwater monitoring required to be conducted at the well site(s) in accordance with Table 6 of the Code of Practice: Onshore Petroleum Activities in the Northern Territory was submitted to DEPWS on 16 January 2023.
	<p>iv. develop site-specific performance standards for groundwater quality and interquartile ranges for analytes at each of the impact monitoring bores established, based on the first 3 years of groundwater monitoring, and provide to DEPWS, via <a href="mailto:Onshoregas.depws@nt.gov.au">Onshoregas.depws@nt.gov.au</a> within 6 months of the 3 year anniversary of approval of the EMP.</p>	Not Applicable	The EMP has only been active for 2 years. 3 years of groundwater monitoring has not yet been undertaken. Timeframe is not within the reporting period of this AEPR.
6	The ground-truthing committed to in the EMP must be undertaken one week in advance of commencement of ground-disturbing activities by a qualified and experienced ecologist with experience in Gouldian finch habitat requirements to ensure alternative routes are identified in the field prior to commencement of clearing.	Not Applicable	Clearing did not occur during the reporting period of October 2022- October 2023 under IMP4-3.
7	<p>Prior to the commencement of ground-disturbing activities, the interest holder must engage an ecologist with experience in Gouldian Finch habitat requirements to prepare a map of potential Gouldian Finch breeding habitat that could be impacted by the regulated activity. The potential Gouldian Finch breeding habitat mapping must:</p> <ol style="list-style-type: none"> <li>be provided to DEPWS via <a href="mailto:Onshoregas.dewps@nt.gov.au">Onshoregas.dewps@nt.gov.au</a> in advance of commencement of ground-disturbing activities; and</li> <li>quantify the proportion of the regulated activity footprint that consists of potential Gouldian Finch breeding habitat.</li> </ol>	Not Applicable	Clearing did not occur during the reporting period of October 2022- October 2023 under IMP4-3.
8	Clearing of vegetation within mapped potential Gouldian Finch breeding habitat for access tracks, wastewater flowlines, gravel pits and well pads must avoid removal of trees with hollows with a diameter of >25 cm at breast height, to the maximum extent practicable.	Not Applicable	Clearing did not occur during the reporting period of October 2022- October 2023 under IMP4-3.
9	<p>In support of schedule 1, item 11 of the Petroleum (Environment) Regulations 2016 (NT) and clause A.3.5 of the Code of Practice: Onshore Petroleum Activities in the Northern Territory, the interest holder must provide geospatial files to DEPWS, via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a>, within 2 months of completion of each ground- disturbing or land clearing activity, as specified in Figure 3.2 of the EMP (Project schedule), which must:</p> <ol style="list-style-type: none"> <li>include information on how the data was obtained;</li> <li>meet the requirements specified by DEPWS at <a href="https://nt.gov.au/property/land-clearing/freehold-land/apply-to-clear-freehold-land/spatial-data-for-clearing-applications">https://nt.gov.au/property/land-clearing/freehold-land/apply-to-clear-freehold-land/spatial-data-for-clearing-applications</a>;</li> <li>include riparian zones, areas of high value vegetation (which includes potential Gouldian Finch breeding habitat), areas of high density of hollow-bearing trees and the buffers applied</li> </ol>	Compliant	Geospatial files were supplied to DEPWS via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> , on 16 January 2023. Further geospatial files were provided on the 17 April 2023.

No	Ministerial Condition	Performance Status	Evidence
	<p>as a result of ground-truthing activities, as polygons and with metadata indicating the area in hectares;</p> <p><b>iv.</b> include any resultant deviations to the location of the regulated activity;</p> <p><b>v.</b> include the location of any listed species sighted during ground-truthing; and</p> <p><b>vi.</b> include the proposed and actual areas of vegetation cleared, as polygons and with metadata indicating the area in hectares.</p>		
10	<p>To support clause C.7.2 of the Code of Practice: Onshore Petroleum Activities in the Northern Territory, all accidental releases of liquid contaminant or hazardous chemical must be immediately recorded in a site spill register, including all spills or leaks from the wastewater flowlines, regardless of volume. The spill register and geospatial files specifying the location of the spill must be submitted to DEPWS via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> three months after the 12 month anniversary of the approval of the EMP each year while the EMP is in force. The register must include:</p> <p><b>i.</b> the location, source and volume of the spill or leak;</p> <p><b>ii.</b> volume of impacted soil removed for appropriate disposal and the depth of any associated excavation;</p> <p><b>iii.</b> volume of impacted soil removed for appropriate disposal and the depth of any associated excavation;</p> <p><b>iv.</b> GPS co-ordinates of the location of the spill.</p>	Compliant	Spill Register was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 13 January 2023.
11	<p>In support of clause 16 of the <i>Water Act 1992</i> (NT) and clause B.4.2 of the <i>Code of Practice: Onshore Petroleum Activities in the Northern Territory</i>, the interest holder must undertake groundwater level/pressure monitoring at each impact monitoring bore established, using a logger to record water level for 2 weeks prior to, during, and 4 weeks after completion of hydraulic fracturing operations at each new well pad established under the EMP. Data logging should record at a minimum of every 4 minutes for the duration of the recording period. The logging data should be provided to DEPWS via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> within 2 weeks of completion of groundwater level monitoring in each impact monitoring bore.</p>	Compliant	Data for IMP 4-3 Carpentaria 3 was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 7 March 2023.
12	<p>The interest holder must undertake monthly surface water monitoring in accordance with section C.8 of the <i>Code of Practice: Onshore Petroleum Activities in the Northern Territory</i> upstream and downstream of streams which are crossed by wastewater flowlines, while those flowlines contain wastewater during the wet season. The interest holder must prepare and implement a Surface Water Sampling and Analysis Plan, 2 months in advance of commencement of any wet season during which it is proposed to use wastewater flowlines that cross streams, and include:</p> <p><b>i.</b> the location and number of proposed monitoring points;</p> <p><b>ii.</b> the method for sample collection; and</p> <p><b>iii.</b> quality control and chain of custody procedures.</p>	Not Applicable	No wastewater flowlines were constructed under IMP4-3 during the reporting period of October 2022 – October 2023.
13	<p>All freshwater used to flush the wastewater flowlines must be treated as contaminated wastewater until such time it is demonstrated that the water used to flush the flowlines has a quality consistent with uncontaminated groundwater:</p> <p><b>i.</b> This is to be demonstrated by:</p> <ul style="list-style-type: none"> <li>• undertaking analysis of the flushing water against the wastewater analytes in clause C.8 of the <i>Code of Practice: Onshore Petroleum Activities in the Northern Territory</i>; and</li> <li>• simultaneous measurement of electrical conductivity using calibrated field instrumentation, which must be calibrated prior to use each time; and</li> <li>• statistical analysis of data to demonstrate a significant correlation between the presence of contaminants and electrical conductivity.</li> </ul>	Not Applicable	No wastewater flowlines were constructed under IMP4-3 during the reporting period of October 2022 – October 2023.

No	Ministerial Condition	Performance Status	Evidence
	<p>ii. If part i above provides a clear demonstration that electrical conductivity can be used as a surrogate for contaminants, the interest holder may thereafter use field-based measurement of electrical conductivity, using instrumentation that must be calibrated prior to use each time, to demonstrate the flushing water is free from contaminants.</p> <p>iii. All records of measurement of the flushing water must be maintained in an auditable form.</p> <p>iv. Whenever a flowline that has been left for a period of more than 3 months with groundwater in it (post flushing) must be assumed to be contaminated and treated as wastewater.</p> <p>v. No flushing water may be released to ground.</p>		
14	<p>The interest holder must prepare and implement a Rapid Response Site Demobilisation and Stabilisation Plan that details the strategy for environmental risks, including management of drill cuttings and wastewater that may result in the event a flood inundates access and/or a well pad, within 2 months of approval of the EMP. The Plan should:</p> <p>i. include response strategies, including options for removal of drill cuttings and removal, covering and/or transfer of wastewater in open treatment tanks;</p> <p>ii. identify personnel who would implement;</p> <p>iii. identify equipment required, including pumping capacity and number of pumps for the transfer of wastewater from open to enclosed tanks;</p> <p>iv. identify access constraints that would affect the response and how this would be managed;</p> <p>v. specify the timeframes for responses and demonstrate they are as low as reasonably practicable; and</p> <p>vi. include a commitment to commence site preparation and wet season planning by 31 July each year following EMP approval.</p>	Not Applicable	The Rapid Response Site Demobilisation and Stabilisation Plan was originally submitted on 20 December 2021 (outside the reporting period of this AEPR).
15	<p>Prior to the commencement of drilling, the interest holder must provide to DEPWS, via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a>, bowtie-diagrams that demonstrate how potential loss of containment of wastewater will be managed, inclusive of preventative and mitigative controls, that:</p> <p>i. consider loss of containment from wastewater treatment and storage tanks, drill cutting pits and wastewater flowlines;</p> <p>ii. consider wet and dry season conditions; and</p> <p>iii. consider the location of a loss of containment event.</p>	Not Applicable	Drilling under IMP4-3 was commenced prior to the reporting period of this AEPR.
16	The interest holder must provide to DEPWS, via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> , a cementing report for the surface casing through the Gum Ridge Formation and the Bukalara Formation, as soon as practicable but not more than 14 days after completion of the cementing job for each well.	Compliant	<p>Cementing reports for the surface casing were submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on:</p> <ul style="list-style-type: none"> <li>17 October 2022 for the Carpentaria 3H well</li> <li>20 December 2022 for the Carpentaria-4V well.</li> </ul>
17	<p>In support of clause C.4.1.2 of the Code of Practice: Onshore Petroleum Activities in the Northern Territory, the interest holder must provide to DEPWS, via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a>, no later than 3 months of completion of the drilling program on one well pad north and one well pad south of the Carpentaria Highway, a report that:</p> <p>i. provides the outcome of assessment and leachability testing of residual drill fluids and drill cuttings; and</p> <p>ii. provides the recommended disposal option.</p>	Not Compliant	Report was not provided within 3 months of completion of Carpentaria 4 (well pad south of the Carpentaria Highway). Report is being finalized and will be submitted outside the required timeframe.
18	The interest holder must ensure at all times there is sufficient capacity to enclose the complete volume of flowback fluid and produced water on the well pad in above- ground infrastructure that meets the requirements of clauses A.3.8 and C.4.2.2(b) of the Code of Practice: Onshore Petroleum Activities in the Northern Territory.	Compliant	Site photos demonstrate above- ground infrastructure meets the requirements of clauses A.3.8 and C.4.2.2(b) of the Code of Practice: Onshore Petroleum Activities in the Northern Territory.
19	Prior to the commencement of hydraulic fracturing at any new exploration well, the interest holder must provide an updated Stakeholder Engagement Log (Appendix 11) which demonstrates engagement that was postponed as a result of COVID-19 travel restrictions has been completed. Any required amendments to the EMP resulting from assessment of an objection or claim from a stakeholder must be submitted to DEPWS via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> in accordance with regulation 22 or 23 of the Petroleum (Environment) Regulations 2016 (NT), as applicable.	Not Applicable	No stakeholder engagement was postponed due to COVID-19 during the reporting period of October 22- October 23. Annual work program meeting was held on 2 November 2022.

No	Ministerial Condition	Performance Status	Evidence
20	<p>The interest holder must provide to DEPWS within 6 weeks of completion of well flowback operations at each new exploration well established under the EMP a report on a comprehensive risk assessment of flowback wastewater from the hydraulic fracturing phase, via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a>. The risk assessment must be:</p> <ul style="list-style-type: none"> <li>i. prepared by a suitably qualified person; and</li> <li>ii. prepared in accordance with the monitoring wastewater analytes specified in section c.8 of the Code of Practice: Onshore Petroleum Activities in the NT.</li> <li>iii. Assess degradation of hydraulic fracturing chemicals in the wastewater; and</li> <li>iv. consider the impacts and risks on fauna and potential for soil and water contamination from loss of containment, based on the analytical results obtained.</li> </ul>	Not Applicable	Well flowback operations were not completed during the reporting period of this AEPR (October 2022-October 2023).

Table 3 demonstrates Imperial's compliance with Ministerial Direction Letter.

**Table 3 Compliance with Ministerial Direction Letter issued 25/11/2022**

No	Ministerial Condition	Performance Status	Evidence
1	Imperial Oil and Gas Pty Ltd (Imperial) is directed to comply with Clause B.4.17.2(c) of the Code and the Preliminary Guideline: Groundwater Monitoring Bores for Exploration Petroleum Wells in the Beetaloo Sub-Basin (the Guideline), which require a control monitoring bore and an impact monitoring bore to be established for each aquifer present at a well pad. For the avoidance of doubt, Imperial is directed to:		
	a) ensure a control monitoring bore and an impact monitoring bore are installed on each well pad established under the EMP, for each aquifer present at each well pad in accordance with the Guideline;	Compliant	A control monitoring bore and an impact monitoring bore are installed on each well pad in accordance with the Guideline.
	b) ensure each monitoring bore established is screened at the top, middle and bottom of each aquifer encountered in accordance with the Guideline;	Not Applicable	No new control or impact monitoring bores have been completed since the issuing of this Directive.
	c) ensure a control monitoring bore for the Bukalara Sandstone aquifer is installed on the Carpentaria-1 well pad 6 months prior to further drilling on the Carpentaria-1 well pad; and	Not Applicable	No further drilling has occurred on the Carpentaria 1 well pad.
d) notify the Department of Environment, Parks, and Water Security (DEPWS) via <a href="mailto:onshoregas.DEPWS@nt.gov.au">onshoregas.DEPWS@nt.gov.au</a> within one month of installation of each new control or impact monitoring bore, providing detail on: <ul style="list-style-type: none"> <li>i. the date establishment of the monitoring bore was completed;</li> <li>ii. the aquifer the monitoring bore is targeting;</li> <li>iii. its Registered Number; and</li> <li>iv. its proposed use (impact monitoring, control monitoring and/or water production for use).</li> </ul>	Not Applicable	No new control or impact monitoring bores have been completed since the issuing of this Directive.	
2	Imperial is directed to comply with Clause B.4.17.2(b)(i) of the Code, which requires a minimum of six months of local baseline water quality data to be collected prior to drilling of petroleum wells intended to be hydraulic fractured. For the avoidance of doubt, Imperial is directed to:		
	a) ensure monthly baseline groundwater sampling is carried out for every control monitoring bore required to be installed under (1) above, over a minimum period of 6 months prior to drilling, or 6 months prior to hydraulic fracturing if there are demonstrable circumstances that are outside of Imperial's control;	Compliant	Compliant for all petroleum wells intended to be hydraulic fractured, in this case, Carpentaria 2 and 3 wells.
	b) where Imperial believes there are circumstances that are outside of Imperial's control which prevent undertaking 6 months of groundwater baseline monitoring prior to drilling, maintain records of the circumstances;	Not Applicable	Not Applicable during the reporting period of this AEPR.
c) provide the results of the monthly baseline groundwater sampling, which must be compliant with Table 6 of the Code, to DEPWS as soon as practicable and in any case within two months of sampling via <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> , in a format to be advised by DEPWS;	Not Applicable	Not Applicable during the reporting period of this AEPR.	

No	Ministerial Condition	Performance Status	Evidence
	d) ensure the sampling results are included in the interpretative report required to be provided under Condition 5 of the Approval Notice and Statement of Reasons issued for IMP4-3 on 17 October 2021; and	Compliant	An interpretative report of groundwater quality based on the groundwater monitoring required to be conducted at the well site(s) in accordance with Table 6 of the Code of Practice: Onshore Petroleum Activities in the Northern Territory was submitted to DEPWS on 16 January 2023
	e) continue groundwater monitoring of all control monitoring and impact monitoring bores installed on well pads established under the EMP quarterly for a total of three years, including any groundwater monitoring already conducted for each aquifer encountered at a well pad.	Not Compliant	As per Ministerial Condition 5(ii).
3	Clauses C.4.2.2(a) and C. 7.1.1 (a)(ii) of the Code operate together to require all produced water and flowback fluid (wastewater) to be held in above-ground enclosed tanks at all times unless it is being treated, reused, disposed of, or removed from site. If treatment occurs outside of enclosed tanks, the EMP must include a plan to transfer wastewater back into enclosed tanks or to enclose open treatment tanks at least eight hours before a predicted significant rainfall event. For the avoidance of doubt, Imperial is directed to:		
	a) ensure there is capacity to accommodate all flowback fluid and produced water (wastewater) in above-ground enclosed tanks available on each tank pad established under the EMP;	Compliant	Email sent to DEPWS email on the 6/12/2022 meeting the requirements of this Ministerial Condition
	b) ensure that all wastewater is enclosed at least eight hours before a predicted significant rainfall event (as defined in the approved EMP);		
	c) include with the notification already required to be provided under Condition 1 (i) of the Approval Notice and Statement of Reasons issued for IMP4-3 on 17 October 2021, demonstration that the available enclosed tank capacity is sufficient to store the full wastewater volume expected to be returned to surface after hydraulic fracturing;		
d) if the proposed method for enclosing wastewater is through use of a removable tank cover, provide details via <a href="mailto:onshoregas.depws@nt.gov.au">onshoregas.depws@nt.gov.au</a> of the proposed method for ensuring rainwater collected on the tank cover is able to be removed continuously during the wet season such that the integrity of the tank cover is not at risk.			
4	Imperial is directed to comply with Clauses C.5.4 and C.5.5 of the Code, which set monitoring requirements for both flowback fluid and combined flowback fluid and produced water (wastewater) storage. For the avoidance of doubt, Imperial is directed to:		
	a) undertake continuous monitoring (at least once per 24 hours) of electrical conductivity, pH and temperature of flowback fluid prior to transferring flowback fluid into storage tanks, in accordance with clause C.5.4(b)(i) of the Code for the period flowback is occurring at any well;	Compliant	Continuous monitoring (at least once per 24 hours) of electrical conductivity, pH and temperature of flowback fluid prior to transferring flowback fluid into storage tanks, in accordance with clause C.5.4(b)(i) of the Code for the period flowback occurred at Carpentaria 2/3.
	b) undertake at least weekly monitoring of flowback fluid quality prior to going into the storage tanks, in accordance with clauses C.5.4(b)(ii) and C.8 of the Code;	Compliant	Weekly monitoring of flowback fluid quality prior to going into the storage tanks, in accordance with clauses C.5.4(b)(ii) and C.8 of the Code has been undertaken
	c) develop criteria based on the analytes listed in clause C.8 of the Code for determining that flowback fluid quality has stabilized sufficient to cease weekly monitoring in accordance with clause C.5.4(b)(ii) of the Code, for provision to DEPWS via <a href="mailto:onshoregas.depws@nt.gov.au">onshoregas.depws@nt.gov.au</a> for review and acceptance by DEPWS;	Not Applicable	Monitoring was undertaken during the reporting period flowback.
	d) continue weekly monitoring until Imperial can demonstrate the flowback fluid quality is consistent with the criteria developed under item c) and has stabilized sufficient to cease monitoring; and	Compliant	Monitoring was undertaken during the reporting period while receiving flowback.
e) undertake at least 6 monthly sampling and analysis in accordance with clauses C.5.5(c) and C.8 of the Code of the combined produced water and flowback fluid (wastewater) storage until there is no wastewater in storage.	Compliant	6 monthly sampling and analysis in accordance with clauses C.5.5(c) and C.8 of the Code of the combined produced water and flowback fluid (wastewater) storage has been undertaken	

Table 4 provides a systematic overview of Imperial's performance against the environmental outcomes and environmental performance standards within the approved EMP.

Table 4 Compliance with Environmental Outcomes and Environmental Performance Standards

No	Environmental Outcome	Environmental Performance Standard	Performance Status	Evidence
1	<p>Conduct of the regulated activity does not create any:</p> <ul style="list-style-type: none"> <li>• safety risks for the public or landholders,</li> <li>• activities do not impede on the activities of stakeholders,</li> <li>• activities have no negative impacts on the community and cultural heritage</li> </ul>	No complaints from the community around excessive dust	Compliant	<ul style="list-style-type: none"> <li>• Community complaints register shows no complaints received concerning dust generation during the reporting period of October 2022-October 2023</li> </ul>
2		Speed limits adhered to	Compliant	<ul style="list-style-type: none"> <li>• Site induction records include requirements related to adhering to speed limits</li> </ul>
3		Minimal incidence of dust created from unsealed roads (minimal being 4 incidents reported within a 2-week period)	Compliant	<ul style="list-style-type: none"> <li>• Community complaints register shows no complaints received concerning dust generation during the reporting period of October 2022-October 2023</li> </ul>
4		Speed limits posted on unsealed access tracks adhered to	Compliant	<ul style="list-style-type: none"> <li>• Site induction records include requirements related to adhering to speed limits</li> </ul>
5		Movements on publicly accessible roads carried out in a safe manner	Not Compliant	<ul style="list-style-type: none"> <li>• Q4 Oct to Dec 2022 Quarterly Recordable Report contains an incident where a third party contractor trailer turned on its side along the Carpentaria Highway, 58km east of Daly Waters on the way to site. No injuries occurred and no members of the public were involved.</li> <li>• Community complaints register shows no complaints received concerning dangerous driving</li> </ul>
6		No damage to or loss of public infrastructure and equipment or community lands	Compliant	<ul style="list-style-type: none"> <li>• Site induction records include landholder protocols, weed requirements, legislation and infrastructure issues.</li> </ul>
7		Well site fenced and signposted permanently with the well name, well number, major hazards and details of the interest holder	Compliant	<ul style="list-style-type: none"> <li>• DITT Planned Inspection Exit Brief 30 August 2023 noted "General signage overall to a very high standard"</li> </ul>
8		No impact on cultural heritage sites	Compliant	<ul style="list-style-type: none"> <li>• Clearing did not occur during the reporting period of October 2022-October 2023 under IMP4-3.</li> </ul>
9		No instances of overtopping of pits, Flowback Water and Produced Water tanks due to significant weather events	Compliant	<ul style="list-style-type: none"> <li>• Operational checks show that wet season forecasts occur to</li> </ul>

No	Environmental Outcome	Environmental Performance Standard	Performance Status	Evidence
				determine whether predicted rainfall poses a risk to freeboard of pits and tanks
10		No impact on the stakeholder to their use of the land	Compliant	<ul style="list-style-type: none"> <li>DITT Planned Inspection Exit Brief 30 August 2023 noted "General signage overall to a very high standard"</li> <li>Community complaints register shows no complaints received in regards to the use of the land</li> </ul>
11		To deliver benefits to the local community	Compliant	<ul style="list-style-type: none"> <li>Local contractors were employed to deliver services/goods under IMP4-3 during the reporting period of October 2022- October 2023</li> </ul>
12		No impacts on landholders or on the community regarding lighting, noise or vibrations	Compliant	<ul style="list-style-type: none"> <li>Community complaints register shows no complaints received concerning noise, vibration or light spill</li> </ul>
13		No livestock on site	Compliant	<ul style="list-style-type: none"> <li>Operational checks show that well site fence installed and intact</li> </ul>
14		No vegetation cleared beyond the approved areas	Compliant	<ul style="list-style-type: none"> <li>Site induction records include clearing requirements</li> </ul>
15		No introduction of new weed species or spread of existing weed populations as a result of conduct of the regulated activity	Compliant	<ul style="list-style-type: none"> <li>DEPWS Weed Management Branch Inspection March 2023</li> <li>DEPWS Weed Management Branch Inspection July 2023</li> </ul>
16	Ensure that sensitive receptors, significant conservation areas, or listed species or their habitat are not permanently affected by the conduct of the regulated activity.	No fires in surrounding areas resulting from conduct of the regulated activity	Compliant	<ul style="list-style-type: none"> <li>Quarterly recordable reports do not contain fires resulting from conduct of the regulated activity during the reporting period of October 2022 - October 2023</li> <li>Site induction records include restricted smoking areas, emergency response plan</li> <li>Flare stack monitored during flaring (daily flowback reports)</li> </ul>
17		No vermin attracted to site due to improper storage of general wastes	Compliant	<ul style="list-style-type: none"> <li>Operational checks show no incidences of putrescible waste being accessible to vermin</li> <li>Site induction records include waste segregation and disposal</li> </ul>



No	Environmental Outcome	Environmental Performance Standard	Performance Status	Evidence
18		Waste transported appropriately	Compliant	<ul style="list-style-type: none"> <li>All listed waste transported by licensed waste contractors</li> <li>Waste transfer records show Environment Protection Licence (EPL) number of waste contractor</li> </ul>
19		No leaks from flowlines	Not Applicable	<ul style="list-style-type: none"> <li>No wastewater flowlines constructed under IMP4-3 during the reporting period of October 2022 – October 2023</li> </ul>
20		All waste segregated onsite according to whether it is hazardous, recyclable or for general disposal	Compliant	<ul style="list-style-type: none"> <li>Operational checks confirm waste appropriately segregated</li> <li>Site induction records include waste segregation and disposal</li> </ul>
21		Maintain the freeboard in open- topped wastewater treatment tanks over the wet season	Compliant	<ul style="list-style-type: none"> <li>Quarterly recordable reports demonstrate that no overtopping events occurred during the wet season as a result of excessive rain during the reporting period of October 2022 – October 2023.</li> </ul>
22		Wastewater from drilling stored in lined pits	Compliant	<ul style="list-style-type: none"> <li>Documentation and site photographs available demonstrating the lining in pits meet Code requirements.</li> </ul>
23		Disturbance to biodiversity from increased noise, vibration and light is minimized to the greatest extent possible	Compliant	<ul style="list-style-type: none"> <li>Site induction records include requirements related to minimizing noise and light spill</li> </ul>
24		No ground disturbance occurs outside of designated areas approved for ground disturbance	Compliant	<ul style="list-style-type: none"> <li>Site induction records include clearing requirements</li> <li>Clearing did not occur during the reporting period of October 2022-October 2023 under IMP4-3.</li> </ul>
25	Actively preventing erosion and sedimentation	Compliant	<ul style="list-style-type: none"> <li>Operational checks show ESC maintenance</li> </ul>	
26	Not allowing areas to continuously erode or create ongoing sedimentation deposits	Compliant	<ul style="list-style-type: none"> <li>Operational checks show ESC maintenance</li> </ul>	
27	No vehicle movements outside of designated areas approved for ground disturbance during construction and seismic acquisition or off access tracks for all other activities	Compliant	<ul style="list-style-type: none"> <li>Site induction records include the prohibition of movement outside approved areas</li> </ul>	
28	Vehicles on access tracks are only allowed to cross intersecting flowing creeks or watercourses with specific authorisations to do so	Compliant	<ul style="list-style-type: none"> <li>Site induction records include the prohibition of crossing</li> </ul>	

No	Environmental Outcome	Environmental Performance Standard	Performance Status	Evidence
				<p>flowing creeks unless approved by the Site Manager</p>
29		<p>All hazardous chemicals or those that may cause environmental harm to be stored in secondary containment, which has sufficient capacity to hold 100% of the volume of the largest container stored unless the container has its own secondary containment.</p>	<p>Compliant</p>	<ul style="list-style-type: none"> <li>Site induction records include the requirements related to the use and storage of hazardous chemicals</li> <li>Operational checks show chemical storage inspections</li> </ul>
30		<p>No instances of loss of containment of wastewater</p>	<p>Compliant</p>	<ul style="list-style-type: none"> <li>Quarterly recordable reports demonstrate that no loss of containment of wastewater occurred during the reporting period of October 2022- October 2023</li> </ul>
31		<p>No instances of overtopping of pits, Flowback Water and Produced Water tanks due to significant weather events</p>	<p>Compliant</p>	<ul style="list-style-type: none"> <li>Quarterly recordable reports demonstrate that no instances of overtopping of pits, flowback water and produced water tanks occurred due to significant weather events during the reporting period of October 2022- October 2023</li> </ul>
32		<p>Freeboard for all pits, Flowback Water and Produced Water tanks maintained at all times</p>	<p>Compliant</p>	<ul style="list-style-type: none"> <li>Operational checks confirm wastewater levels do not exceed freeboard</li> <li>Quarterly recordable reports demonstrate that no overtopping events occurred during the wet season as a result of excessive rain during the reporting period of October 2022 – October 2023.</li> <li>During a DEPWS site visit conducted on 23 May 2023 DEPWS identified that the Carpentaria 2 cutting pit, Carpentaria 2 wastewater tank and Carpentaria 4 cutting pit only had wet season freeboard markings (more conservative), not dry season freeboard markings which is a breach of the measurement criteria "Pits will be marked with the appropriate freeboard for the season." The appropriate freeboard was maintained at all times, but the appropriate markings on the pits/tanks had not been updated post wet season. Even though a measurement</li> </ul>

No	Environmental Outcome	Environmental Performance Standard	Performance Status	Evidence
				criteria wasn't met, Imperial considers itself compliant with the environmental performance standard.
33		All spills remediated immediately on discovery	Compliant	<ul style="list-style-type: none"> <li>Site induction records include the requirements to remediate all spills to the ground immediately</li> <li>Operational checks show chemical storage inspections</li> <li>Spill register confirms spills remediated during the reporting period of October 2022- October 2023</li> </ul>
34		No water to be taken from surface water sources	Compliant	<ul style="list-style-type: none"> <li>Site induction records include prohibition of surface water use at any time</li> <li>Quarterly recordable reports demonstrate that no unauthorized use of surface water occurred during the reporting period of October 2022- October 2023</li> </ul>
35		Compliance with the groundwater extraction licence	Not Compliant	<ul style="list-style-type: none"> <li>Breach of water extraction licence GRF10316 as per DEPWS correspondence 5 May 2023</li> <li>Q1 Jan to Mar 2023 Quarterly Recordable Report records overextraction</li> </ul>
36	The conduct of the regulated activity does not result in the over-extraction or contamination of groundwater resources.	No contamination of aquifers from the regulated activities	Compliant	<p>Quarterly groundwater monitoring emailed to DEPWS:</p> <ul style="list-style-type: none"> <li>~25 November 2022 (portal submission)</li> <li>~16 February 2023 (portal submission)</li> <li>9 June 2023</li> <li>28 June 2023</li> <li>14 September 2023</li> </ul>
37	Local inland water quality is not permanently affected by the conduct of the regulated activity	Vehicle crossing of flowing creeks or watercourses to only occur with specific authorisations	Compliant	<ul style="list-style-type: none"> <li>Site induction records include the prohibition of crossing flowing creeks unless approved by the Site Manager</li> <li>No clearing for seismic lines or Wellpads within buffer zones</li> </ul>

No	Environmental Outcome	Environmental Performance Standard	Performance Status	Evidence
38		No loss of riparian flora	Compliant	<ul style="list-style-type: none"> <li>Clearing did not occur during the reporting period of October 2022-October 2023 under IMP4-3.</li> </ul>
39		All hazardous chemicals or those that may cause environmental harm to be stored in secondary containment, which has sufficient capacity to hold 100% of the volume of the largest container stored unless the container has its own secondary containment.	Compliant	<ul style="list-style-type: none"> <li>Site induction records include the requirements related to the use and storage of hazardous chemicals</li> <li>Operational checks show chemical storage inspections</li> </ul>
40		No pit or tank failure due to flooding inundation	Compliant	<ul style="list-style-type: none"> <li>Quarterly recordable reports demonstrate that no pit or tank failure occurred due to flooding inundation during the reporting period of October 2022- October 2023</li> </ul>
41		All storage vessels for wastewater and hazardous substances are maintained at 100% integrity	Compliant	<ul style="list-style-type: none"> <li>IMP 4-3 inspection records confirm tanks and storage vessels intact during the reporting period of October 2022-October 2023</li> </ul>
42		No impact on inland water environmental quality	Compliant	<ul style="list-style-type: none"> <li>Carpentaria 3 and Carpentaria 4 were constructed following the Code requirements, and passes well acceptance criteria</li> <li>Carpentaria 3 and Carpentaria 4 have blow-out prevention equipment systems installed</li> <li>Induced seismicity reports were sent to DITT within the reporting period of this AEPR</li> </ul>
43	Minimise emissions, including greenhouse gases, created by the conduct of the regulated activity	Operations carried out in a manner that does not create excessive emissions	Compliant	<ul style="list-style-type: none"> <li>Community complaints register shows no complaints received concerning excessive emissions from site</li> </ul>
44		All vehicles, plant and equipment maintained and operated per manufacturer requirements to minimise emissions	Compliant	<ul style="list-style-type: none"> <li>EP 187 Equipment Servicing Register maintained during the reporting period of October 2022 – October 2023</li> </ul>
45		Flaring to be used rather than venting during production testing	Compliant	<ul style="list-style-type: none"> <li>Records kept of flaring events during production testing</li> <li>Emissions report for IMP 4.3 was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 29 September 2023</li> </ul>

No	Environmental Outcome	Environmental Performance Standard	Performance Status	Evidence
46		Gas leak detection, repair and notification to be conducted throughout all phases of the project that have live equipment	Compliant	<ul style="list-style-type: none"> <li>• Site induction records include the requirements to report leaks</li> <li>• Contractor onsite during EPT carried leak detection units</li> <li>• No leaks reported.</li> </ul>

Table 5 demonstrates Imperial's compliance with reporting requirements in the *Code of Practice: Onshore Petroleum Activities in the Northern Territory* (Code of Practice) and Imperials compliance with reporting and monitoring requirements under the Petroleum (Environment) Regulations 2016 (NT) schedule 1, item 11(2), which requires the EMP to include all information required to be recorded, monitored or reported. Where relevant, Imperial has also confirmed that all records, monitoring or required reporting under the Petroleum (Environment) Regulations 2016 (NT),<sup>2</sup> or under a commitment made in the EMP, has been provided to DEPWS or the relevant NTG agency.

**Table 5 Compliance with Reporting and Monitoring Requirements**

No	Reference	Requirement	Performance Status	Evidence
1	Code cl A.3.5	Geospatial information depicting areas cleared is to be provided to the Minister.	Compliant	Geospatial files were supplied to DEPWS via Onshoregas.DEPWS@nt.gov.au, on 16th January 2023. Further geospatial files were provided on the 17 April 2023.
2	Code cl A.3.6 (b)	Weed management plan developed as part of the EMP must provide for ongoing weed monitoring.	Compliant	Appendix 09 Weed Management Plan of EMP 4.3 includes the required clause.
3	Code cl A.3.7(a)vi	The fire management plan developed as part of the EMP must provide for annual fire mapping to monitor changes to fire frequency in the relevant areas.	Compliant	Appendix 08 Fire Management Plan of EMP 4.3 includes the required clause.
4	Code cl A.3.9(c) Code cl A.3.9(e)	The rehabilitation plan developed as part of the EMP requires progressive rehabilitation of significantly disturbed land which is required to commence no longer than 12 months following the cessation of activities on the land. It also requires regular maintenance and annual monitoring of rehabilitated areas.	Compliant	Appendix 12 Rehabilitation Management Plan of EMP 4.3 includes the required clause.
5	Code cl B.4.13.2(c)	As a minimum, the following must be recorded and reported for each stage (where a stage in this context means all fluids pumped at a particular depth interval): <ul style="list-style-type: none"> <li>a. total volume of hydraulic fracturing fluid pumped,</li> <li>b. quality of water used (tested for analytes in section C.8 of this Code. Analyses do not need to be repeated if the same water source is used for multiple stages) and</li> <li>c. typical and maximum concentrations of chemicals or other substances used.</li> </ul>	Compliant	The NT Flowback Report for the Carpentaria-2H was submitted 12 December 2022.
6	Code cl B.4.13.2(k)iv	Where venting is the only technically feasible option for managing produced gas, the technical considerations preventing the use of the recovered gas must be recorded and included in the operator's annual report.	Not Applicable	Annual Flowback Report (D.6.2) submitted December 2023; outside the reporting period of this AEPR.
7	Code cl B.4.14.2(c)	All new barriers or new well operating envelopes must be verified and clearly documented and reported by submission of an updated well barrier integrity validation (WBIV) report to DITT.	Compliant	WBIV report submitted to DITT in April 2023 and resubmitted in October 2023.
8	Code cl B.4.15.2(j)	Complete and accurate records of the entire decommissioning procedure must be kept, with these records submitted as part of the legislative reporting requirements for the decommissioning of petroleum wells.	Not Applicable	No decommissioning occurred during the reporting period of October 2022- October 2023.
9	Code cl C.3(e)	The components of the wastewater management framework, include: Monitor, manage and report in accordance with the Wastewater Management Plan and Spill Management Plan.	Compliant	Appendix 06 Waste and Wastewater Management Plan of EMP 4.3 includes the required clause.

No	Reference	Requirement	Performance Status	Evidence
10	Code cl C.6.1(d)	Wastewater tracking documentation must be reported to the Minister at least annually in accordance with the framework (Spill Management Plan and Wastewater Management Plan) outlined in the EMP	Compliant	Annual Water and Wastewater Report was submitted to Onshoregas.DEPWS@nt.gov.au on 13 January 2023.
11	Code cl C.7.1(d)ii	Wastewater Management Plan must include a program for monitoring and reporting against the effectiveness of the measures for the mitigation of interaction with wildlife, stock and human receptors with wastewater.	Compliant	Appendix 06 Waste and Wastewater Management Plan of EMP 4.3 includes the required clause.
12	Code cl D.5.9.2(c)	Emissions from exploration, well construction (including during flowback) and workovers must be measured, and reports submitted. <i>Note: the interest holder must provide to DEPWS a report on actual versus predicted greenhouse gas emissions in the EMP, and cumulative emissions.</i>	Compliant	Emissions report for IMP 4.3 was submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 29 September 2023.
13	Code cl D.5.9.3(a)	Where natural gas is vented or flared at a gas processing or other downstream facility, emissions must be estimated and reported.	Not Applicable	No gas processing or downstream facility is part of EMP 4.3.
14	Reg 33	DEPWS is notified of reportable incidents within 2 hours of the interest holder becoming aware of the incident, or within 2 hours of the incident occurring. A written report must be provided within 24 hours if the initial report was made orally.	Not Applicable	No reportable incidents occurred under IMP4-3 during the reporting period of October 2022- October 2023.
15	Reg 34	Reports on reportable incidents are to be provided to DEPWS as soon as practicable and within 72 hours of the event occurring. A final report must be provided to DEPWS within 30 days after remediation/clean-up of the affected area.	Not Applicable	No reportable incidents occurred under IMP4-3 during the reporting period of October 2022- October 2023.
16	Reg 35	A written report of all recordable incidents must be provided to DEPWS not later than 15 days after the 90 day reporting period (unless otherwise agreed).	Compliant	All recordable incident reports were provided to DEPWS no later than 15 days after the 90-day reporting period. Reports were submitted to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on the below dates. Q4 Oct to Dec 2022 – emailed January 2023 Q1 Jan to Mar 2023 – emailed 11 April 2023 Q2 Apr to Jun 2023 – emailed 14 July 2023 Q3 Jul to Sep 2023 – emailed 12 October 2023
17	Reg 37A EMP Appendix 06	A report about flowback fluid from hydraulic fracturing must be provided to the Minister within 6 months of the flowback occurring.	Compliant	Reg 37A and 37B report submitted 12 December 2022
18	Reg 37B EMP Appendix 06	A report about produced water from hydraulic fracturing must be provided to the Minister within 6 months of the produced water being extracted.	Compliant	Reg 37A and 37B report submitted 12 December 2022
19	Schedule 1, item 12	Interest holder must notify the Minister, occupier of the land and owner of the land on which the activity is to be carried out <b>before</b> commencement of construction, <sup>3</sup> drilling, or seismic surveys.	Compliant	Notification of commencement was supplied to <a href="mailto:Onshoregas.DEPWS@nt.gov.au">Onshoregas.DEPWS@nt.gov.au</a> on 6 December 2022

<sup>3</sup> Note, civil works are also considered 'construction' activities.

### 3. Overall Performance

#### 3.1. Overview of performance

Table 6 provides a summary of the results of the compliance assessment against the 119 total compliance items.

**Table 6 Performance Summary**

Compliance Indicator	Number	Percentage
Compliant	88	74%
Not Compliant	7	6%
Not Applicable	24	20%

#### 3.2. Overview of items found not compliant

The following sections describe:

- o the specific compliance requirements not met for the reporting period o an analysis of the possible potential environmental harm or impact to environmental values resulting from non-compliance using multiple lines of evidence
- o a summary of the corrective actions already implemented, and further actions still required, as applicable, to ensure compliance is fully achieved in the future.

##### 3.2.1. Ministerial Approval Condition Non-Compliances

**Table 7 Overview of non-compliant Ministerial Conditions and Ministerial Directive**

MC	Description	Analysis of potential environmental harm or impact	Corrective actions
1(ii)	A minor non-compliance with Ministerial Condition 1(ii) occurred due to submitting one quarterly timetable two days after the required date. The timetable was submitted 2 July 2023 instead of by the due date 30 June 2023.	No potential environmental harm or impact.  Minor administrative non-compliance.	Recorded in the IMP4-3 Q2 Quarterly Recordable Report submitted to DEPWS on 15 July 2023.  Due dates for future regulated timetable submissions have been entered into Imperial's compliance task planner.
1(vi)	Non-compliance with Ministerial Condition 1(vi) daily checks on the: 16/01/23 - 22/01/23 30/01/23 - 05/02/23 06/02/23 - 08/02/23 10/02/23 - 19/02/23 27/02/23 - 12/03/23 13/03/23 - 23/03/23 ... due to inability to access Carpentaria 4 during a period of wet weather.	Imperial tracked comparable close-by pit levels given similar evaporation and rain deposit rates of other local sites.  No overtopping events occurred.  Monitoring non-compliance.  No environmental harm or impact was caused.	Recorded in the IMP4-3 Q1 Quarterly Recordable Report submitted to DEPWS.  Pan tilt zoom cameras have been installed across sites to ensure visibility is maintained during periods of inactivity / site inaccessibility.  Track maintenance on the Carpentaria 4 access track was undertaken May / June 2023 to increase likelihood of accessibility in the following wet season.
5(ii)	Two instances of non-compliance with Ministerial Condition 5(ii) quarterly groundwater monitoring occurred during the reporting period.  Quarterly sampling was not undertaken for RN042461 (Carpentaria 2) due to a malfunctioning pump when sampling was attempted in April 2023.  Quarterly sampling was not undertaken for RN43012 (Carpentaria 4) during April 2023 due to access restrictions during a period of wet weather.	No environmental harm or impact was caused.  Monitoring non-compliance.	Recorded in the IMP4-3 Q2 Quarterly Recordable Report submitted to DEPWS on 15 July 2023.  A new groundwater pump was installed at Carpentaria 2 and sampling resumed.  Track maintenance on the Carpentaria 4 access track was undertaken May/ June 2023 to increase likelihood of accessibility in the following wet season.
17	Non-compliant with Ministerial Condition 17, (sampling and reporting residual drilling fluids and drill cuttings of Carpentaria 4). Sampling was delayed due to wet weather conditions and laboratory analysis of the results is taking an extended period of time.	The report was not provided within 3 months of completion of Carpentaria 4 (well pad south of the Carpentaria Highway) as is required by the Ministerial Condition.  No environmental harm or impact was caused.  Administrative non-compliance.	Recorded in the IMP4-3 Q2 Quarterly Recordable Report submitted to DEPWS on 15 July 2023. The three-month timeframe under this ministerial condition makes compliance difficult - results can take up to two months to receive back from the laboratory with analysis requiring further time. Sampling should be organised immediately after drilling completion.



Table 8 Overview of non-compliant Environmental Performance Standards

Description	Analysis of potential environmental harm or impact	Corrective actions
<p>Previously recorded non-compliance with Environmental Performance Standard "<i>vehicle movements on publicly accessible roads carried out in a safe manner</i>" on Q4 Quarterly Recordable Report.</p> <p>A third party contractor transporting sand from South Australia to the Carpentaria 2 well pad had the third trailer of a triple road train turn onto its side. The trucking process, during which the above occurred, is not managed or operated by Imperial and did not occur on the Exploration Permit. Imperial is not responsible for the transportation process and does not take ownership of the sand until it reaches its final destination.</p> <p>Initial incident investigation determined that the driver swerved to avoid an animal and, in the process, caused the 3rd trailer to turn on its side. The rear trailer and Dolly were loaded with 17 bags of 40/70 sand on board prior to being turned onto its side as it was travelling along the Carpentaria Highway some 58 Kms east of Daly Waters heading towards site.</p>	<p>There were no injuries and the truck, and two trailers remained intact. No members of the public were involved.</p> <p>The incident site was cleaned on the 28 December 2022 to remove any safety risks.</p> <p>The spilt substance was not hazardous, no environmental harm or impact.</p>	<p>The site was cleaned up by the third-party contractor.</p> <p>A NT Police Report was filed in Alice Springs by the third party contractor.</p> <p>The NT WorkSafe Incident was undertaken by the third party contractor.</p>
<p>Non-compliance with Environmental Performance Standard "<i>Compliance with the groundwater extraction licence</i>".</p> <p>On 5 of May 2023 Imperial Oil and Gas Pty Ltd received a warning letter under the Water Act 1992 (Act) from Brett Doherty, Regulation Officer DEPWS. Water Resource Division records indicated that total maximum water entitlement for licence GRF10316 for the period 1 May 2022 to 30 April 2023 was exceeded. In this period, water extraction was 103.7 mega litres (ML), and although compliant with the EMP, it was 17.3 ML over the maximum water entitlement of 85 ML specified in the GWEL and therefore a breach of section 61 of the Act.</p>	<p>This is the first such occurrence recorded for Imperial as a licence holder and DEPWS noted that the impact on the water resource is likely to be minor. Over extraction was a result of schedule changes in Carpentaria 3/4 executed works and unanticipated water usage (including inner liner replacement of the Water Tanks on Carpentaria 2 / 3 during initial hydraulic fracturing).</p> <p>Minor environmental impact.</p>	<p>Recorded in the IMP4-3 Q1 Quarterly Recordable Report submitted to DEPWS.</p> <p>Steps have been taken to address the breach including monitoring water use through the water year (monthly reporting) and analysing future water requirements against the licence current allocation.</p>

### 3.3. Application of lessons learned across Imperial's operations

Imperial continues to refine processes and procedures to increase compliance with the Code of Practice and the obligations of EMPs.

Lessons learnt during the reporting period:

- Entry of compliance requirements into Imperial's task planner increases the likelihood of achieving requirements within necessary timeframes.
- Investing in site infrastructure (such as pan-tilt-zoom cameras and site access track maintenance) allows for a greater range of options when undertaking monitoring commitments.